

**Oroville Facilities Relicensing Efforts
Draft Narrative Reports for PM&E Discussion**

Resource Action: EWG-82

Task Force Recommendation Category: 1

**Develop Protection and Avoidance Protocols for Sensitive Plant Populations in
the Project Area**

Description of Potential Resource Action:

This Resource Action would develop protection and avoidance protocols for sensitive plant populations in the Project area. These would be designed to minimize impacts from facilities maintenance or development, noxious weed management, road maintenance and development, recreational use or development, and/or maintenance associated with recreation areas.

The following Resource Actions are either similar to or directed related to the proposed measure:

- EWG 59 – modify recreation use pattern at Thermalito Complex to minimize impacts to sensitive wildlife species
- EWG 62 – enhance/restore native plant communities in upland areas

Nexus to Project:

Impacts to native vegetation, including special status species habitats, within the project area around Lake Oroville include past and ongoing construction and maintenance activities, roads, trails, campgrounds, and other recreational activities. Maintenance and other land disturbing activities promote the proliferation of invasive plant species which have the potential to invade native communities and special status species habitats in adjacent upland and wetland/riparian areas.

Potential Environmental Benefits:

This Resource Action would help minimize impacts to special status plant species in the Project Area. Although, none of the species are federally or State listed species, they are considered by the California Native Plant Society as rare, threatened, or endangered in California, and have potential to be listed in the future. Protection of populations within the Project boundary will aid in species recovery and hopefully help prevent federal or State listing in the future.

Potential Constraints:

Limiting use of recreational roads and off-road vehicles may prove difficult in unimproved recreation areas. Weed management around the Thermalito Afterbay

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may impact special status species if broad-cast spray methods are used. Impacts can be minimized by using hand sprayers.

Existing Conditions in the Proposed Resource Action Implementation Area:

Twelve special status plant species are currently known to occur in the Project area (CDWR 2004a). Seven of these species are included on the USFS Sensitive Plant List. Five are found in the Project Area below Oroville Dam. Two of these species are located within the wet margins of the Thermalito Afterbay and are most abundant in a number of brood ponds. One species is associated with vernal pools near the Thermalito Forebay, another occurs around the margins of the Thermalito Diversion Pool, and another in ponds in the Oroville Wildlife Area (OWA). Seven species are located in upland habitats around the Diversion pool and/or upland habitats or mesic sites above the Oroville Dam. All seven species also occur on federal lands within the Project area. Many of the upland species around Lake Oroville, inhabit openings in woodlands. As shrub and tree canopies become denser, these species are restricted to openings along road cuts and edges of other disturbed areas

A number of these species occur in and near recreational areas including the Lime Saddle Campground, Nelson Bar Cartop Boat Ramp, Goat Ranch Boat-In Campground, Bloomer Boat-in Campground, Foreman Creek Recreation Area, Potter Ravine Recreation Area, Stringtown Cartop Boat Ramp, Craig Saddle Boat-In Campground, Loafer Creek Recreation Area, Kelly Ridge Recreation Area, Thermalito Complex, and the OWA. No special status plant species populations were identified as being adversely affected by current Project operations, maintenance, and/or recreational use.

Design Considerations and Evaluation:

A sensitive resource map has already been developed and distributed. This map identifies areas where avoidance measures should be followed to reduce or eliminate impacts to both plant and wildlife sensitive species.

Potential measures to limit impacts to special status plant species within the Project area from Project-related activities and current and future recreational use and/or development include:

- Avoid siting new recreational/project facilities within areas mapped as sensitive resource area for plants and wildlife (CDWR 2004b)
- Minimize impacts from maintenance activities
- Limit off-road vehicle use near sensitive plant sites
- Revegetate and/or restore native plant habitats within disturbed areas to minimize invasive species establishment

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- Support prescribed burns and/or biomass reduction techniques on wildlands to open up tree and shrub canopies for special status plant species
- Contact appropriate DWR personnel when potential work is to occur near areas identified on the sensitive resource map

The development of additional brood ponds will most likely increase suitable habitat for the four-angled spikerush and Sanford's sagittaria. These species have benefited from the consistent water levels within the Afterbay and particularly the brood ponds. Long drawdown periods may adversely affect these species. Conservation measures are already in place to limit impacts to vernal pools near the Thermalito Forebay. Impacts to special status species around Lake Oroville can be avoided by limiting soil disturbance from maintenance and/or new development near special status plant species locations.

Synergism and Conflicts:

A number of other Resource Actions aim to protect sensitive resources, as well as enhance native vegetation around Lake Oroville. Construction of additional brood ponds will increase wetland habitat for special status plant species. Conflicts may arise as new trails, roads, facilities, and/or maintenance activities are located within or near special status species populations.

Uncertainties:

Many of these populations are near recreation areas. Although damage from off-road vehicle use and/or foot traffic has not been observed at the present time, impacts may occur in the future.

Cost Estimate:

There are no costs associated with this Resource Action at this time. Actions that are in place under the current license and/or under other Resource Actions (EWG 56, EWG 59, and EWG 62) will help to protect and enhance special status plant species and habitats in the Project area.

Recommendations:

No additional measures are recommended at this time that are not part of other Resource Actions for protection and enhancement of special status species habitats.

Literature Cited:

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CDWR (California Department of Water Resources). 2004a. SP-T2 Project Effects on Special Status Plant Species. Draft Final Report. Sacramento, California. March 2004.

CDWR (California Department of Water Resources). 2004b. Draft Final Report. SP-T9: Recreation and Wildlife. Sacramento, California. June 2004